<center>**Remarks**</center>

Claims 1-5 previously have been canceled and Claims 6-20 remain pending. Claims 6-14 and 18-20 stand rejected under 35 U.S.C. §103(a) as being obvious from the teachings of Kanematsu in view of Holupka. Claims 15-17 similarly stand rejected under 35 U.S.C. §103(a) as being obvious from the teachings of Kanematsu in view of Holupka and Vaezy.

Claim 6 has been amended to require "each sectional view being an image containing pixels with values derived from <u>averaging</u> a plurality of voxels in the tomography dataset which are disposed transverse to the corresponding section." Support for this amendment can be found in page 3, paragraph 5 and page 7, paragraph 2 of the application as filed. No new matter has been added.

Amended Claim 6 is directed to a radiotherapy apparatus that processes two-dimensional radiation imaging to produce tomography data (i.e., three-dimensional imaging data). The tomography data provides sectional views containing pixels derived from averaging voxels from the tomography data which are disposed transversely to the sectional view. A therapeutic source can be controlled according to this arrangement to produce therapeutic radiation. The current Office Action suggests that one of skill in the art would find it obvious to combine the teachings of Kanematsu and Holupka so as to produce a system according to Claim 6. Applicant respectfully disagrees.

Kanematsu uses patient position data derived from a Cone Beam Computed Tomography (CBCT) system to control a therapeutic source. The Kanematsu imager generates a 3D imaging output and has a therapeutic source controllable in response to the difference between the CT data and the planning data to produce therapeutic radiation. In contrast to the present invention,

<center>-5-</center>

Kanematsu does not display a 3D data set but a numerical result denoting the degree of difference between the two types of data. Kanematsu does not teach or suggest computing means for processing the imaging output to produce a plurality of intersecting sectional views, each sectional view being an image containing pixels with values derived from averaging a plurality of voxels in the tomography dataset which are disposed transverse to the corresponding section.

Holupka discloses a 3D visualization technique for invasive radiotherapy. In the example described in Holupka, 3D ultrasound image data is represented as perspective two dimensional views in transverse, corona) and saggital planes, with the two dimensional images intersecting at a common centre point. There is no reference in Holupka to the two dimensional sectional views each being derived as a result of averaging a plurality of voxels in the "image stack" which are transposed transverse to the corresponding section.

The latest Office Action contends that Holupka discloses the further features not disclosed by Kanematsu and that it would have been obvious to modify Kanematsu with image processing means to produce a plurality of intersecting sectional views as taught by Holupka. However, a person of skill in the art would not be motivated to combine these two references because they are concerned with solving entirely different problems. And even if the teachings of Kanematsu and Holupka were combined, it still would not produce the present invention as defined by amended Claim 6.

More specifically, amended Claim 6 in part requires that the computing means derived a sectional view from averaging a plurality of voxels in the tomography dataset which are disposed transverse to the corresponding section. But Kanematsu is concerned with displaying a numerical result and there is no incentive to modify the Kanematsu invention to produce a plurality of

intersecting views. The Examiner seems to consider that each two dimensional image/sectional view of Holupka is derived from a plurality of voxels—that is, we assume that he interprets this to be the entire 3D scan (including voxels) which are transverse to the corresponding section. But where Holupka refers to using pixel averaging to improve the 3D image (see column 6, lines 31 to 40), still there is no teaching or suggestion of reducing noise in the 2D imaging by averaging a plurality of voxels transverse to the section. That is, Holupka does not disclose averaging a plurality of voxels in the "image stack" to derive 2D intersecting sectional views.

Thus, neither Kanematsu nor Holupka teaches or suggests the arrangement required by Claim 6, which is therefore allowable. Claims 7 to 20 are all dependent on Claim 6 and are therefore allowable for the same reasons. Reconsideration of the claims and issuance of a Notice of Allowance is respectfully requested.

Conclusion

Applicant hereby requests a one month extension of time in accordance with the provisions of 37 C.F.R. § 1.136. Please charge deposit account 19-4972 for the amount of $130.00 for the fee for the one month extension of time. Applicant believes that no further extension of time is required; however, this conditional petition is being made to provide for the possibility that the applicant has inadvertently overlooked the need for a further additional extension of time. If any additional fees are required for the timely consideration of the application, please charge deposit account number 19-4972.

Respectfully submitted,

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